

Application No. 10/614,437

In the Claims:

1 - 6. (Cancelled)

7. (New) A surgical treatment for remediating the pathogenesis of primary glaucoma, said treatment comprising resection of the meridional fibers of the Brucke muscle at any attachment thereof, by the steps of:

- (a) resection by a surgical knife of meridional fibers of ciliary muscle of ora serrata between places of attachment of rectus muscles;
- (b) leaving intact areas of anterior ciliary arteries and long posterior ciliary arteries;
- (c) decreasing blood flow in the posterior choroid;
- (d) eliminating hemostasis of posterior ciliary arteries and its branches;
- (e) improving blood supply of the optic nerve; and
- (f) improving blood supply of the ciliary body and iris.

8. (New) The surgical treatment of claim 7 wherein said surgical knife has a diamond blade.

9. (New) A surgical treatment for remediating the role of meridional fibers of Brucke's muscle in the pathogenesis of primary glaucoma, wherein venous stasis of the ciliary body and hemostasis in vessels of posterior central choroids as well as beginning ischemia of the optic nerve result from spasm of meridional fibers of the ciliary muscle to cause primary glaucoma, the beginning and development of glaucoma being associated with the act of accommodation, by which the eye adjusts to near and far vision, wherein glaucoma is considered to begin when circulation of aqueous humor is infringed, and elevated intraocular pressure most often is a result of increased resistance to the outflow of aqueous humor from the eye so that (1) the optic axis length changes in the process of accommodation, (2) meridional fibers of the ciliary muscle pull the choroid, and (3) Brucke's muscle takes part in said act of accommodation, (4) meridional fibers contract to pull the peripheral section of the anterior choroids, causing it to thin and causing a reduction of blood flow, and (5) the blood flow to the central section of the posterior choroid increases and the central section of the posterior choroid thickens, the result being that, when the meridional fibers tighten, the retina adjacent to the central section of the posterior choroids moves forward, shortening the optical axis, and when the opposite result occurs, the meridional fibers relax, whereby (6) increased density and decreased elasticity of the lens, typically a result of increasing age, cause presbyopia, (7) increased density and decreased elasticity of the lens cause difficulty in the function of the lens and difficulty in the function of the circular and radial fibers, (8) the load on meridional fibers of ciliary muscle increases and causes spasm, (9) constant pulling of the meridional fibers on the peripheral section of the choroid constantly keeps that part of the choroid very thin, as a result of which (10) blood filling the veins increases with venous stasis and

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hemostasis of the short posterior ciliary arteries and its branches including arteries in the prelaminar region, arteries in the circle of Zinn-Haller, and the pia mater and dura mater vessels, with the occurrence of thickening of central posterior choroids and formation of glaucomatous capping, damage to the blood supply of the optic nerve head, ischemia and atrophy of optic nerve, and primary glaucoma with normal intraocular pressure develops, (11) whereby spasm of the meridional fibers is a cause of said primary glaucoma; said treatment comprising resection of the meridional fibers of said Brucke's muscle at any attachment thereof by the steps of:

- (a) resection by a surgical knife of meridional fibers of ciliary muscle of ora serrata between places of attachment of rectus muscles;
- (b) leaving intact areas of anterior ciliary arteries and long posterior ciliary arteries;
- (c) decreasing blood flow in the posterior choroid;
- (d) eliminating hemostasis of posterior ciliary arteries and its branches;
- (e) improving blood supply of the optic nerve; and
- (f) improving blood supply of the ciliary body and iris.

10. (New) The surgical treatment of claim 9 wherein said surgical knife has a diamond blade.